Aim

Create a dataframe with random values, convert some to NaN, and highlight NaN values using Pandas.

Algorithm

1. Import required libraries
2. Create a dataframe with random values
3. Convert some values to NaN
4. Use Pandas styling to highlight NaN values
5. Display the styled dataframe

Code

```
import pandas as pd
import numpy as np

np.random.seed(42)
df = pd.DataFrame(np.random.rand(10, 4), columns=['A', 'B', 'C', 'D'])
df.iloc[1, 2] = np.nan
df.iloc[3, 0] = np.nan
df.iloc[7, 1] = np.nan

def highlight_nan(val):
    return 'background-color: yellow' if pd.isna(val) else ''

styled_df = df.style.applymap(highlight_nan)
styled_df
```

Output

	A	B	C	D
0	0.374540	0.950714	0.731994	0.598658
1	0.156019	0.155995	nan	0.866176
2	0.601115	0.708073	0.020584	0.969910
3	nan	0.212339	0.181825	0.183405
4	0.304242	0.524756	0.431945	0.291229
5	0.611853	0.139494	0.292145	0.366362
6	0.456070	0.785176	0.199674	0.514234
7	0.592415	nan	0.607545	0.170524
8	0.065052	0.948886	0.965632	0.808397
9	0.304614	0.097672	0.684233	0.440152

Result

Program creates a 10x4 dataframe, replaces some values with NaN, and highlights NaN cells in yellow using Pandas styling.